

IN THE CLAIMS

1. (currently amended) A ~~radio~~—communication system, comprising:

a first ~~radio~~—communication apparatus; and

a second ~~radio~~—communication apparatus ~~having associated with a unique data value for identifying said second radio communication apparatus, the unique data including pieces formed of a sequence of bits—data;~~

said first ~~radio~~—communication apparatus including:

transmitting means for transmitting a first signal from the first communication apparatus to the second communication apparatus using an electromagnetic wave of a first operational frequency, the first signal being a command, for transmitting a further signal from the first communication apparatus to the second communication apparatus using the electromagnetic wave of the first operational frequency after said transmitting of the first signal, and for sequentially transmitting a plurality sequence of check pulses to said second ~~radio~~—communication apparatus concurrent with said transmitting of the further signal using an electromagnetic wave of a second operational frequency whereby a given one of the sequence of check pulses is transmitted at a predetermined time intervals, each after the transmitting of its immediately preceding check pulse—being operable to check a corresponding piece of the bit data; and detecting means for detecting the unique data by determining each piece of the bit data based on whether there is a response from said second radio communication apparatus to each of the check pulses transmitted by said transmitting means; and

said second ~~radio~~—communication apparatus including:

using means for using the received further signal to generate internal power in response to receiving the first signal,

generating ~~exiting~~ means for ~~exiting~~ generating an associated surface acoustic wave ~~corresponding to each~~ whenever one of the sequence of the check pulses is received, transmitted by said first radio communication apparatus,

determining ~~setting~~ means for ~~setting~~ determining whether to respond to a particular one of the sequence of check pulses ~~to be transmitted by said first radio communication apparatus~~ based on a value ~~content~~ of a given one of the piece sequence of bits, said determining being carried out for each one of the sequence of bits, data to be checked by the check pulse to be transmitted, and

responding means for ~~responding to a transmitted check pulse, said responding means reflecting a~~ the surface acoustic wave ~~corresponding to the transmitted check pulse when said setting determining means has made a setting determines that said second communication apparatus is to respond to the transmitted associated check pulse, and said responding means passing for allowing the surface acoustic wave to pass corresponding to the transmitted check pulse when said setting determining means has made a setting prohibiting a determines that said second communication apparatus is not to respond~~ se to the ~~transmitted associated check pulse;~~

said first communication apparatus further including:

determining means for determining the values of each one of the sequence of bits by detecting, for each one of the sequence of transmitted check pulses, whether there is a response from said second communication apparatus.

2. (currently amended) A method of ~~radio communicating~~ between a first ~~radio communication apparatus~~ and a second ~~radio communication apparatus,~~ having unique data for identifying the second radio communication apparatus, the being associated with a unique data value including pieces formed of a sequence of bits ~~data,~~ said ~~radio communication method~~ comprising:

transmitting a first signal from the first communication apparatus to the second communication apparatus using an electromagnetic wave of a first operational frequency, the first signal being a command;

transmitting, after said transmitting of the first signal, a further signal from the first communication apparatus to the second communication apparatus using the electromagnetic wave of the first operational frequency, the further signal being used by the second communication apparatus to generate internal power in response to receiving the first signal;

sequentially—transmitting, concurrent with said transmitting of the further signal, a plurality sequence of check pulses from the first radio-communication apparatus to the second radio-communication apparatus using an electromagnetic wave of a second operational frequency whereby a given one of the sequence of check pulses is transmitted at a predetermined time intervals, after the transmitting of its immediately preceding each check pulse being operable to check a corresponding piece of the bit data;

determining, setting in at the second radio-communication apparatus, whether to respond to a particular one of the sequence of check pulses to be transmitted by the first radio communication apparatus based on a content value of a given one of the sequence piece of bits, said determining step being carried out for each one of the sequence of bits data to be checked by the check pulse to be transmitted;

generating exciting an associated surface acoustic wave at the second radio-communication apparatus in response to each whenever one of the sequence of check pulses is received transmitted by the first radio communication apparatus;

reflecting the excited surface acoustic wave corresponding to a transmitted check pulse when a setting said determining step determines that the second communication apparatus is to

~~respond to the transmitted~~ its associated ~~check pulse has been set in the second radio communication apparatus, and passing allowing the excited surface acoustic wave to pass corresponding to the transmitted check pulse when a setting prohibiting a said determining step determines that the second communication apparatus is not to respond~~ se to the transmitted ~~the associated~~ check pulse has been set in the second radio communication apparatus; and

~~detecting the unique data by determining, at the first communication apparatus, the values of each piece one of the sequence of bits data in the second radio communication apparatus based on~~ by detecting, for each one of the sequence of transmitted check pulses, whether there is a response from the second radio communication apparatus to each of the check pulses transmitted from the first radio communication apparatus.

3. (currently amended) A first ~~radio~~—communication apparatus for ~~radio~~—communicatingen with a second ~~radio~~ communication apparatus, ~~having unique data for identifying the second radio communication apparatus, the being associated with a unique data value including pieces formed of a sequence of bits data,~~ said first ~~radio~~—communication apparatus comprising:

transmitting means for transmitting a first signal from the first communication apparatus to the second communication apparatus using an electromagnetic wave of a first operational frequency, the first signal being a command, for transmitting a further signal from the first communication apparatus to the second communication apparatus using the electromagnetic wave of the first operational frequency after said transmitting of the first signal whereby the second communication apparatus uses the further signal to generate internal power in response to receiving the first signal, and for sequentially-transmitting a plurality—sequence of check pulses to the second radio communication apparatus concurrent with said transmitting of the

further signal using an electromagnetic wave of a second operational frequency whereby a given one of the sequence of check pulses is transmitted at a predetermined time intervals after the transmitting of its immediately preceding check pulse,
~~each check pulse being operable to excite a surface acoustic wave at the second radio communication apparatus and to check a corresponding piece of the bit data;~~

receiving means for receiving ~~reflected~~ an associated surface acoustic waves emitted from the second radio communication apparatus in response to ~~the surface acoustic waves excited by specific ones of the plurality of check pulses transmitted by said transmitting means;~~ and

determining ~~detecting~~ means for determining the values of detecting the unique data by determining each one piece of the sequence of bits data in the second radio communication apparatus based on by detecting, for each one of the sequence of transmitted check pulses, whether said receiving means has receiveds a reflected the associated surface acoustic wave in response thereto each surface acoustic wave excited by the check pulses transmitted by said transmitting means.

4. (cancelled)

5. (cancelled)

6. (currently amended) A first ~~radio~~ communication apparatus as claimed in claim 43, wherein ~~said power supply means supplies the~~ electromagnetic wave of the second operational frequency is a power as light wave having an energy corresponding to the internal power.

7. (currently amended) A method of ~~radio communicating~~ with a ~~radio communication apparatus having associated with a unique data value formed of a sequence for identifying the radio communication apparatus, the unique data including pieces of bits data,~~ said ~~radio communication method~~ comprising:

transmitting a first signal to the communication apparatus using an electromagnetic wave of a first operational frequency, the first signal being a command;

transmitting, after said transmitting of the first signal, a further signal to the communication apparatus using the electromagnetic wave of the first operational frequency whereby by the communication apparatus uses the further signal to generate internal power in response to receiving the first signal;

~~sequentially~~—transmitting, concurrent with said transmitting of the further signal, a plurality—~~sequence~~ of check pulses to the ~~radio~~—communication apparatus using an electromagnetic wave of a second operational frequency whereby a given one of the sequence of check pulses is transmitted at a predetermined time intervals, each after the transmitting of its immediately preceding check pulse being operable to excite a surface acoustic wave at the radio communication apparatus and to check a corresponding piece of the bit data;

receiving ~~reflected~~—an associated surface waves emitted from the radio communication apparatus in response to specific one of the sequence of surface acoustic waves excited by the check pulses transmitted in the transmitting step; and

~~detecting the unique data by determining the values of each piece~~—one of the sequence of bits data in the radio communication apparatus based on by detecting, for each one of the sequence of transmitted check pulses, whether a reflected the associated surface wave is was received in the receiving step in response thereto each surface acoustic wave excited by the check pulses transmitted in the transmitting step.

8. (cancelled)

9. (currently amended) A first ~~radio~~—communication apparatus for ~~radio~~—communicating with a second ~~radio~~ communication apparatus, said first ~~radio~~—communication

~~apparatus having being associated with a unique data value for identifying said first radio communication apparatus, the unique data including pieces formed of a sequence of bits data, said first radio communication apparatus comprising:~~

receiving means for receiving a first signal using an electromagnetic wave of a first operational frequency from the second communication apparatus, the first signal being a command, and for receiving a further signal using the electromagnetic wave of the first operational frequency from the second communication apparatus after said receiving of the first signal;

using means for using the further signal to generate internal power in response to receiving the first signal;

said receiving means for receiving a sequence of check pulses from the second communication apparatus using an electromagnetic wave of a second operational frequency concurrent with said receiving of the further signal whereby a given one of the sequence of check pulses is receiving at a predetermined time interval after the receiving of its immediately preceding check pulse;

generating ~~exiting~~ means for exiting generating an associated surface acoustic wave corresponding to each of a plurality whenever one of the sequence of check pulses transmitted is received from the second radio communication apparatus at predetermined time intervals, each check pulse being operable to check a corresponding piece of the bit data;

determining ~~setting~~ means for setting determining whether to respond to a particular one of the sequence of check pulses to be transmitted by the second radio communication apparatus based on a ~~content~~ value of a given one of the ~~piece~~ sequence of bits, said determining step being carried out for each one of the sequence of bits data to be checked by the check pulse to be transmitted; and

~~responding means for responding to a transmitted check pulse, said responding means reflecting a~~ the ~~surface acoustic wave corresponding to the transmitted check pulse when said setting determining means has made a setting determines that said first communication apparatus is to respond to the transmitted its associated check pulse, and said responding means passing for allowing the surface acoustic wave to pass corresponding to the transmitted check pulse when said setting determining means has made a setting prohibiting a determines that said first communication apparatus is not to respond to the transmitted associated check pulse.~~

10. (currently amended) A first ~~radio~~—communication apparatus as claimed in claim 9, wherein said responding means includes:

a reflection electrode having a pair of terminals, said reflection electrode reflecting the associated surface acoustic wave ~~excited by said exciting means when said pair of terminals is open, and passing allowing the surface associated acoustic wave to pass excited by said exciting means when said pair of terminals is short-circuited,~~ and

a switch connected to said pair of terminals, ~~and wherein~~ said ~~setting determining~~ means operates said switch to open said pair of terminals when said ~~setting determining~~ means ~~makes a setting determines that said first communication apparatus is to respond to the associated check pulse to be transmitted, and said setting means operates said switch to short-circuit said pair of terminals when said setting determining means makes a setting prohibiting a determines that said first communication apparatus is not to respond to the associated check pulse to be transmitted.~~

11. (currently amended) A first ~~radio~~—communication apparatus as claimed in claim 9, further comprising:

storing means for storing the unique data value~~in advance~~,
~~and power providing means for providing power supplied from the~~
~~second radio communication apparatus as power for use by said~~
~~setting means to read the piece of bit data to be checked by the~~
~~check pulse to be transmitted from the unique data stored in~~
~~said storing means and to set whether to respond to the check~~
~~pulse to be transmitted based on the content of the read piece~~
~~of bit data.~~

12. (cancelled)

13. (currently amended) A first ~~radio~~—communication
apparatus as claimed in claim ~~109~~, wherein the electromagnetic
wave of the second operational frequency ~~second radio~~
~~communication apparatus transmits the power supplied to said~~
~~power providing means as is a light wave having an energy~~
corresponding to the internal power generated by said using
means.

14. (currently amended) A method of ~~radio~~—communicating~~en~~
with a ~~radio~~—communication apparatus in which to provide the
~~radio~~—communication apparatus detects predetermined with a
unique data value, ~~the unique data including pieces formed of~~
bits data, said ~~radio~~—communication method comprising:

receiving a first signal using an electromagnetic wave of a
first operational frequency from the second communication
apparatus, the first signal being a command;

receiving a further signal using the electromagnetic wave
of the first operational frequency from the second communication
apparatus after said receiving of the first signal;

using the further signal to generate internal power in
response to receiving the first signal;

receiving a sequence of check pulses from the second
communication apparatus using an electromagnetic wave of a
second operational frequency concurrent with said receiving of
the further signal whereby a given one of the sequence of check

pulses is receiving at a predetermined time interval after the receiving of its immediately preceding check pulse;

generating ~~exciting~~ an associated surface acoustic wave corresponding to each of a plurality whenever one of the sequence of check pulses is received~~transmitted from the radio communication apparatus at predetermined time intervals, each check pulse being operable to check a corresponding piece of the bit data;~~

determining ~~setting~~ whether to respond to a particular one of the sequence of check pulses to be transmitted by the radio communication apparatus based on a content value of a given one of the ~~piece~~ sequence of bits, said determining step being carried out for each one of the sequence of bits~~data to be checked by the check pulse to be transmitted; and~~

reflecting the ~~responding to a transmitted check pulse by reflecting a surface acoustic wave corresponding to the transmitted check pulse when a setting to respond to the transmitted~~ said determining step determines that its associated check pulse is to have a response has been set in the setting step, and by ~~passing~~ allowing the surface acoustic wave to pass corresponding to the transmitted check pulse when said determining step determines that the associated a setting prohibiting a response to the transmitted check pulse is not to have a response~~has been set in the setting step.~~

15. (cancelled)

16. (new) A computer-readable medium recorded with instructions for carrying out a method of communicating between a first communication apparatus and a second communication apparatus, the second communication apparatus being associated with a unique data value formed of a sequence of bits, said method comprising:

transmitting a first signal from the first communication apparatus to the second communication apparatus using an

electromagnetic wave of a first operational frequency, the first signal being a command;

transmitting, after said transmitting of the first signal, a further signal from the first communication apparatus to the second communication apparatus using the electromagnetic wave of the first operational frequency, the further signal being used by the second communication apparatus to generate internal power in response to receiving the first signal;

transmitting, concurrent with said transmitting of the further signal, a sequence of check pulses from the first communication apparatus to the second communication apparatus using an electromagnetic wave of a second operational frequency whereby a given one of the sequence of check pulses is transmitted at a predetermined time interval after the transmitting of its immediately preceding check pulse;

determining, at the second communication apparatus, whether to respond to a particular one of the sequence of check pulses based on a value of a given one of the sequence of bits, said determining step being carried out for each one of the sequence of bits;

generating an associated surface acoustic wave at the second communication apparatus whenever one of the sequence of check pulses is received;

reflecting the surface acoustic wave when said determining step determines that the second communication apparatus is to respond to its associated check pulse, and allowing the excited surface acoustic wave to pass when said determining step determines that the second communication apparatus is not to respond to the associated check pulse; and

determining, at the first communication apparatus, the values of each one of the sequence of bits by detecting, for each one of the sequence of transmitted check pulses, whether there is a response from the second communication apparatus.

17. (new) A computer-readable medium recorded with instructions for carrying out a method of communicating with a communication apparatus associated with a unique data value formed of a sequence of bits, said method comprising:

transmitting a first signal to the communication apparatus using an electromagnetic wave of a first operational frequency, the first signal being a command;

transmitting, after said transmitting of the first signal, a further signal to the communication apparatus using the electromagnetic wave of the first operational frequency whereby by the communication apparatus uses the further signal to generate internal power in response to receiving the first signal;

transmitting, concurrent with said transmitting of the further signal, a sequence of check pulses to the communication apparatus using an electromagnetic wave of a second operational frequency whereby a given one of the sequence of check pulses is transmitted at a predetermined time interval after the transmitting of its immediately preceding check pulse;

receiving an associated surface wave from the communication apparatus in response to specific one of the sequence of surface acoustic waves; and

determining the values of each one of the sequence of bits by detecting, for each one of the sequence of transmitted check pulses, whether the associated surface wave was received in response thereto.

18. (new) A computer-readable medium recorded with instructions for carrying out a method of communicating with a communication apparatus to provide the communication apparatus with a unique data value formed of bits, said comprising:

receiving a first signal using an electromagnetic wave of a first operational frequency from the second communication apparatus, the first signal being a command;

receiving a further signal using the electromagnetic wave of the first operational frequency from the second communication apparatus after said receiving of the first signal;

using the further signal to generate internal power in response to receiving the first signal;

receiving a sequence of check pulses from the second communication apparatus using an electromagnetic wave of a second operational frequency concurrent with said receiving of the further signal whereby a given one of the sequence of check pulses is receiving at a predetermined time interval after the receiving of its immediately preceding check pulse;

generating an associated surface acoustic wave whenever one of the sequence of check pulses is received;

determining whether to respond to a particular one of the sequence of check pulses based on a value of a given one of the sequence of bits, said determining step being carried out for each one of the sequence of bits; and

reflecting the surface acoustic wave when said determining step determines that its associated check pulse is to have a response and allowing the surface acoustic wave to pass when said determining step determines that the associated check pulse is not to have a response.